

## A new species of *Brachymeles* (Reptilia: Scincidae) from Catanduanes Island, Philippines

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*Abstract.*—A new scincid lizard, *Brachymeles minimus*, is described from Catanduanes Island, Philippines. It differs from known species, other than *Brachymeles vermis* and *B. apus*, in the absence of external limbs. *Brachymeles minimus* differs from *B. vermis* and *B. apus* in its smaller size, lower dorsal scale row count, and pattern of head shields.

Catanduanes, an island of low mountain terrain and about 1450 sq. km in area, lies slightly less than 10 km off the southeast coast of Luzon Island. Until recently, published information on its herpetofauna was limited to three species, one crocodile, one lizard, and one snake. Ross & Gonzales (1992), following a survey of the island in 1990, reported a total of 58 species; 13 amphibians, 27 lizards, 17 snakes, and one crocodile. They described one amphibian, *Kaloula kokacii* as new, and list two lizards *Brachymeles* sp., *Gonocephalus* sp., and one snake, *Oxyrhabdium* sp., as being based on specimens not readily assignable to any known species.

Recently, while identifying some *Brachymeles* from other Philippine islands, we also examined the specimens of the unidentified Catanduanes' *Brachymeles*. A sample of four specimens are now available. These, indeed, represent a previously undescribed taxon, the description of which is the subject of this paper.

### Materials and Methods

Materials examined include examples of all 14 previously described species of the genus *Brachymeles* as well as the four known examples of the new species.

Measurements were determined to the nearest 0.1 mm, using a Helios dial caliper. In addition to snout-vent length (SVL), other measurements include head breadth (HB), made at the widest point; snout length (SnL) from anterior corner of eye to tip of snout; and eye diameter (ED) from anterior to posterior corner of the eye. Midbody scale counts (MBSR) were made about halfway between the tip of the snout and the vent, and the dorsal scale count (DSR) from the parietals to the transverse row opposite the vent. Standard nomenclature for head-shields in the Scincidae is followed (Boulenger 1890, Smith 1935, Brown & Alcala 1980).

*Brachymeles minimus*, new species

Fig. 1

*Holotype.*—FMNH 247990, a male (apparently mature based on hemipenes), collected in original forest at 600 m on Mt. Tungaw-tungaw (13°40'N, 124°21'E), about four km west of Gigmoto, Catanduanes Prov., Catanduanes Island, by the junior author on 18 June 1991. MBSR 22; DSR 94; ED 1.2 mm; SvL 64.0 mm; SnL 2.4 mm; HB 4.1 mm.

*Paratypes* (3): FMNH 247991, 250817, CAS 182569 (same locality as holotype)



*Etymology.*—From the Latin *minimus*, meaning small.

### Discussion

Skinks of the genus *Brachymeles*, popularly referred to as burrowing lizards, are rarely if ever seen except when one looks beneath the duff, rotting logs, or in top soil. In association with adaptation to these subterranean habitats, the species of this genus exhibit a remarkable series of limb reduction stages (from relatively short, pentadactyl limbs to complete absence of external limb structures), and correlated body elongation and attenuation stages. For a discussion of limb loss in lizards, see Greer (1989) and Greer & Cogger (1985).

Of the 15 known species of *Brachymeles*, 14 are from the Philippines (Brown & Alcalá 1980) and one from Borneo (Hikada 1982). Five of the 15 species (*bicolor*, *boulengeri*, *gracilis*, *schadenbergi*, and *talinis*) are pentadactyl, but the limbs and digits are short. Seven of the species (*bonitae*, *cebuensis*, *elerae*, *pathfinderi*, *samarensis*, *tridactylus*, and *wrighti*) exhibit further reduction of the limbs and loss of digits ranging from one on either the fore or hind limbs to four or all five on both fore and hind limbs. The remaining three species (*apus*, *vermis*, and *minimus*) have lost all vestiges of external limbs.

*Brachymeles minimus* differs from the other limbless species (*apus* and *vermis*) in the smaller size and lower count for DSR (Table 1). It also differs from these two species in the pattern of the head shields: (1) frontoparietals large, in contact (separated for *apus* and *vermis*) and (2) five or six superciliaries (two beneath anterior supraoculars for *apus* and *vermis*), Table 1 and Fig. 1. *Brachymeles minimus* is most similar to *B. samarensis* in the pattern of the head-shield arrangement. Both species have: (1) the fronto-parietals in contact, (2) five supraoculars, (3) a pair of narrow nuchals, and (4) lack a postnasal. *Brachymeles minimus* differs from *B. samarensis* in the complete

absence of external limb structures, the number of dorsal scale rows, and the slightly larger eye relative to snout length (Table 1).

The evidence from scale counts and patterns of head-shield development suggests that *apus* and *vermis* may be the end products of a different evolutionary branch than that from which *minimus* is derived. A phylogenetic study, using additional lines of evidence to those presently available, is very much needed to clarify relationships within this genus.

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